

WHAT IS CLAIMED IS:

1. A method of selecting laser beam in an optical disk drive, wherein either CD laser beam or DVD laser beam is selected to read data from an optical disk, the method comprising the steps of:

5 using the CD laser beam to read the optical disk to generate a first tracking error signal;

 determining if the first tracking error signal is correct; and

 using the CD laser beam to read data from the optical disk if the first tracking error signal is correct; and using the DVD laser beam to read data
10 from the optical disk if the first tracking error signal is incorrect.

2. The method according to claim 1, wherein the step of determining if the first tracking error signal is correct further comprises:

 determining if the first tracking error signal is not smaller than a threshold;

15 using the CD laser beam to read data from the optical disk if the first tracking error signal is not smaller than the threshold; and using the DVD laser beam to read the optical disk and generate a second tracking error signal if the first tracking error signal is smaller than the threshold; and

 using the DVD laser beam to read data from the optical disk if the

second tracking error signal is correct, and ending the method if the second tracking error signal is incorrect.

3. A method of selecting laser beam in an optical disk drive, wherein either CD laser beam or DVD laser beam is selected to read data from an optical disk, the method comprising the steps of:

using the CD laser beam to illuminate the optical disk to obtain a memory capacity of the optical disk;

determining if the memory capacity is not larger than a standard memory capacity; and

using the CD laser beam to read data from the optical disk if the memory capacity is not larger than the standard capacity, and using the DVD laser beam to read data from the optical disk if the memory capacity is larger than the standard capacity.

4. The method according to claim 3, wherein after the step of determining if the memory capacity is not larger than the standard capacity, the method further comprises:

using the DVD laser beam to read the optical disk and generate a tracking error signal if the memory capacity is larger than the standard capacity;

determining if the tracking error signal is correct; and

using the DVD laser beam to read data from the optical disk if the tracking error signal is correct, and ending the method if the tracking error signal is incorrect.

5 5. A method of selecting laser beam in an optical disk drive, wherein either a first laser beam or a second laser beam is selected to read data from an optical disk, the method comprising the steps of:

using the first laser beam to read the optical disk to generate a first testing result;

10 determining if the first testing result is normal; and

using the first laser beam to read data from the optical disk if the first testing result is normal, and using the second laser beam to read data from the optical disk if the first testing result is abnormal.

15 6. The method according to claim 5, wherein the first testing result comprises a first tracking error signal.

7. The method according to claim 6, wherein the step of determining if the first testing result is normal further comprises: determining if the first tracking error signal is not smaller than a threshold.

8. The method according to claim 7, wherein the first laser beam is

used to read data from the optical disk if the first tracking error signal is not smaller than the threshold, and the second laser beam is used to read data from the optical disk if the first tracking error signal is smaller than the threshold.

5 9. The method according to claim 5, wherein the first testing result comprises a memory capacity of the optical disk.

 10. The method according to claim 9, wherein the step of determining if the first testing result is normal further comprises: determining if the memory capacity is not larger than a standard memory capacity.

10 11. The method according to claim 10, wherein the first laser beam is used to read data from the optical disk if the memory capacity is not larger than the standard capacity.

 12. The method according to claim 10, wherein the second laser beam is used to read data from the optical disk if the memory capacity is larger than
15 the standard capacity.

 13. The method according to claim 5, wherein the step of using the second laser beam to read the optical disk, if the first testing result is abnormal, further comprises:

 using the second laser beam to read the optical disk and generate a
20 second tracking error signal;

determining if the second tracking error signal is correct; and

using the second laser beam to read data from the optical disk if the second tracking error signal is correct, and ending the method if the second tracking error signal is incorrect.

5 14. The method according to claim 5, wherein the wavelength of the second laser beam is smaller than the wavelength of the first laser beam.

15 15. The method according to claim 14, wherein the first laser beam is CD laser beam.

10 16. The method according to claim 14, wherein the second laser beam is DVD laser beam.

17. The method according to claim 5, wherein the wavelength of the second laser beam is larger than the wavelength of the first laser beam.

18. The method according to claim 17, wherein the first laser beam is DVD laser beam.

15 19. The method according to claim 17, wherein the second laser beam is CD laser beam.

20. The method according to claim 5, wherein the optical disk drive is capable of reading CD and DVD optical disks.

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